Installation Guide

NOVARA CP-3008 ControlPad

Overview

The Novara CP-3008 ControlPad (**FG1302-08**) (FIG. 1) with built-in Ethernet port combines a controller with an easy to use 8-button keypad that mounts onto a standard two gang US, UK, or EU back box. The ControlPads are configured using the *NOVARA DCS (Device Configuration Software)* software application, available for download from www.amx.com. Refer to the *NOVARA 3000 Series ControlPads & KeyPads Operation/Reference Guide* (available at www.amx.com) for configuration instructions. The CP-3008 ControlPad can be configured to control volume, input selection and power for a wide range of A/V devices.

The ControlPad connects to AMX's Resource Management Suite® (RMS) which enables web-based remote diagnostics and management through the built-in Ethernet Port. The ControlPads are available in Black, White, and Brushed Aluminum finishes.

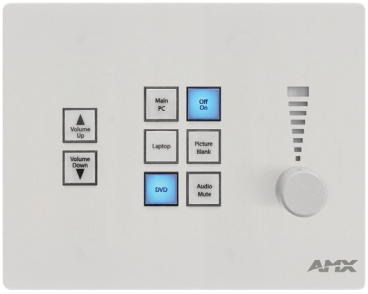


FIG. 1 Novara CP-3008-BA ControlPad

Product Specifications

NOVARA CP-3008 ControlPad Specifications	
Power Requirements:	• Min: 121mA@12 V_{DC} • Max: 320mA@12 V_{DC} • Using a non-PoE power supply operates on voltages ranging from 9V to 16V continuously.
Button Layout:	• 8 red, green, and blue backlit buttons with programmable feedback • Pressable volume knob • Volume indicator
Colors:	• Aluminum: FG1302-08-A • Black: FG1302-08-B • White: FG1302-08-W
Rear Panel Connectors:	• **Power** - 1 2-pin Phoenix connector accepting 12V_{DC} power • **Serial** - 2 3-pin Phoenix connectors for RS-232 connections. Input voltage: V_{IH} > +2.7 V_{DC}, V_{IL} < -2.7 V_{DC} Output voltage: V_{OH} > +5.0 V_{DC} @ 35 mA maximum, V_{OL} < -5.0 V_{DC} @ 35 mA maximum • **IR** - 2 2-pin Phoenix connectors for IR emitters. Supports generating carriers up to 1.142 MHz. Output only port. Output voltage: V_{OH} = +3.3 V_{DC} +/- 0.3 V_{DC} @ 13 mA maximum V_{OL} = 0 V_{DC} +/- 0.3 V_{DC} @ 13 mA maximum • **I/O** - 1 4-pin Phoenix connector for I/O connections. Supports sensing contact closure. Input voltage: HIGH (no contact closure): V_{IH} > 2.5 V_{DC} LOW (contact closure): V_{IL} < 0.8 V_{DC} Output voltage: V_{OH} = +3.3 V_{DC} +/- 0.3 V_{DC} (internal 25k Ohm pull-up resistor) V_{OL} = 0 V_{DC} +/- 0.3 V_{DC} (200 mA maximum sink current) • **Relay** - 1 4-pin Phoenix connector for relay connections capable of switching 24 V_{DC} @ 1A maximum or 28V_{AC} @ 1A maximum • **LAN** - 1 RJ-45 connector for LAN connectivity. • **Reset** - 1 pinhole pushbutton for factory reset.
Supported Baud Rates:	Up to 115200
Dimensions (HWD):	4 11/16" x 6" x 1 3/4" (including knob) (11.9cm x 15.2 cm x 4.5 cm)
Weight:	0.863 lbs (0.392 kg)

NOVARA CP-3008 ControlPad Specifications (Cont.)	
Operating Environment:	• Storage temperature range: 14° - 140° F (-10° - 60° C) • Operating temperature range: 32° - 104° F (0° - 40° C) • Relative humidity: 5% to 85%, non-condensing
Included Accessories:	• Power Supply, 90-240VACIN, 12VOUT, 500MA (24-5791-SA) • Pre-printed labels (40-0087)
Other AMX Equipment:	• CP-RMS, RMS Gateway Module (**FG1310-01**) • CC-NIRC, NetLinx IR Emitter (**FG10-000-11**)
Certifications:	FCC Class B, CE, UL, CB Scheme

Mounting Specifications

CP-3008 8-button keypads mount onto standard 2 gang US, UK, or EU back boxes. FIG. 2 displays the dimensions for the CP-3008 ControlPad.

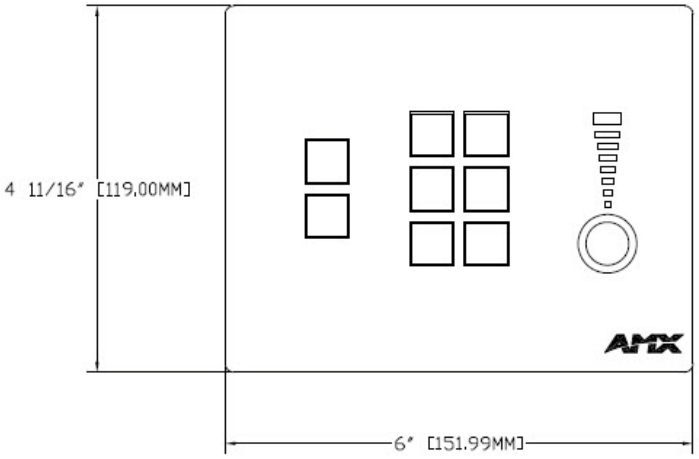


FIG. 2 CP-3008 dimensions

Wiring and Connections

Power

The CP-3008 features a 2-pin Phoenix connector accepting 12V_{DC} power.

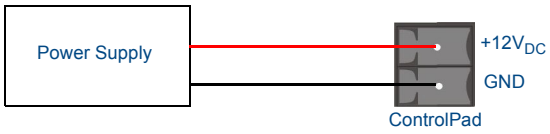


FIG. 3 Power Supply wiring

Serial Connectors

The CP-3008 features two RS-232 connector ports so you can connect up to two serial devices to the ControlPad. The serial connectors comply with EIA-232-F signal levels.

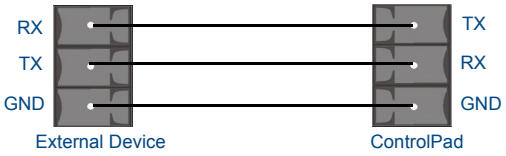
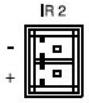


FIG. 4 Serial Connector wiring

IR Connectors

The CP-3008 features two IR connector ports so you can connect up to two IR-controllable devices to the ControlPad. The IR/Serial connector wiring specifications are listed in the following table:



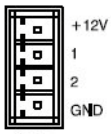
IR Connector Wiring Specifications		
IR connections	**Signal**	**Function**
1	GND (-) Signal 1 (+)	Signal GND IR data
2	GND (-) Signal 2 (+)	Signal GND IR data

FIG. 5 IR port

***WARNING**: Do NOT connect a power connector to either IR port. Doing so may damage the ControlPad.*

I/O Connectors

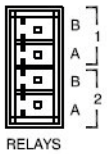
The CP-3008 features I/O connector so you can connect one input/output device to the ControlPad. The PWR pin provides +12 VDC @ 200 mA and is designed as a power output for the PCS Power Current Sensors, VSS2 Video Sync Sensors (or equivalent). The GND connector is a common ground and is shared by all I/O ports. A common ground is shared with I/O ports 1 - 2.



I/O Port Wiring Specifications	
Signal	**Function**
+12V:	PWR
1:	Input/Output
2:	Input/Output
GND	Signal GND

FIG. 6 I/O port

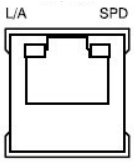
Relays



You cann connect up to two independent external relay devices to the Relay connectors on the ControlPad. Connectors labeled A are for Common and B are for output.

FIG. 7 Relay port

LAN Port



The LAN RJ-45 port provides 10/100 Mbps communication via Cat5/5e/6 network cable. The LAN port uses standard Cat5/5e/6 cables.

FIG. 8 LAN port

Button Labelling

NOVARA ControlPads and KeyPads come with a set of clear plastic Key Caps, which are designed to fit tightly over the pushbuttons, and allow you to place a label on each button according to the requirements of your particular installation.

NOVARA ControlPads and KeyPads also come with a pre-printed acetate sheet with a range of 50 (pre-cut) button label inserts. The button labels provided will accommodate most installations, but it is also possible to print your own button labels on acetate for custom button labelling.

***WARNING**: Attempting to remove the Key Caps while the faceplate is still installed can damage the unit. Use care when removing the Key Caps. Always remove the faceplate before removing the Key Caps. Mishandling the Key Caps can cause permanent damage to the unit and voids warranty.*

Installing Acetate Button Labels and Key Caps - READ THIS FIRST!

1. Punch out the desired Button Label from the included acetate sheet. If you have printed your own custom button labels on acetate, cut each button label to fit inside the Key Caps.
   - Custom button labels must be cut to a **1.14cm (0.45") square** to fit securely inside the Key Caps.
   - The thickness of the acetate used must not exceed **.004"** (**0.10 mm**).
2. Place the Key Cap face-down, and insert the Button Label into the bottom of the Key Cap (FIG. 9).

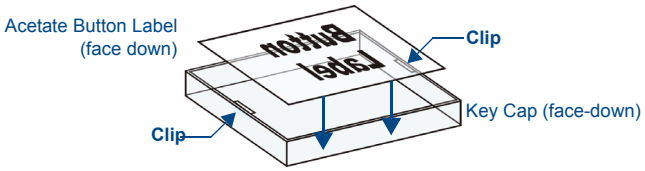


FIG. 9 Placing a Button Label inside a Key Cap

   - Orient the Button Label inside the Key Cap so that the two clips are located on the left and right sides of the readable text on the Button Label, as indicated in FIG. 9.
   - Be sure to place the Button Label face-down inside the Key Cap (see FIG. 9), otherwise the label will be seen in reverse once the Key Cap is installed.
3. Install the Key Cap on the pushbutton (see FIG. 10).

***Note**: Verify that the vertical orientation of the Button Label is correct relative to the keypad.*

   a. Gently press the bottom of the Key Cap (no clip) onto the pushbutton. ***Do not allow the clips on either side to engage**.*
   b. With the bottom of the Key Cap secured, gently press the top of the Key Cap. This action will engage both clips simultaneously, and the Key Cap will snap into place on the push button.

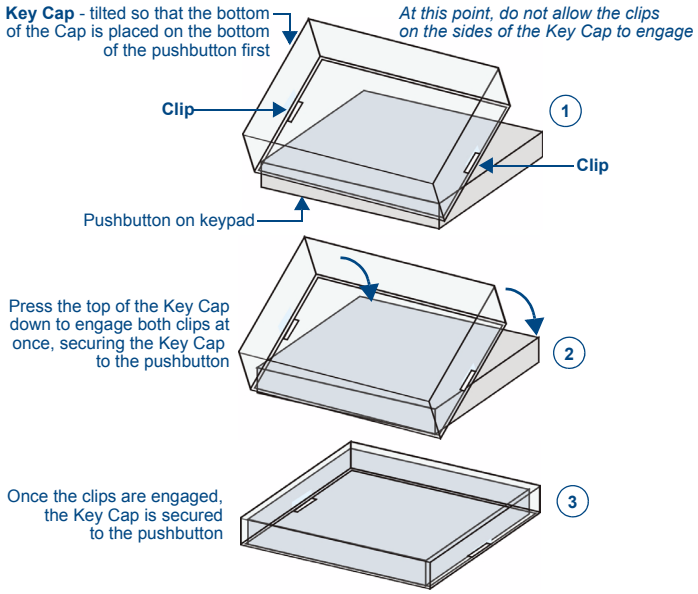

Key Cap - tilted so that the bottom of the Cap is placed on the bottom of the pushbutton first
At this point, do not allow the clips on the sides of the Key Cap to engage
Clip
1
Clip
Pushbutton on keypad
Press the top of the Key Cap down to engage both clips at once, securing the Key Cap to the pushbutton
2
Once the clips are engaged, the Key Cap is secured to the pushbutton
3

FIG. 10 Placing a Button Label inside a Key Cap

***Note**: Be careful to follow these procedures closely - the bottom of the Key Cap must be installed on the pushbutton before the Key Cap clips engage, or there is a risk of the button being misaligned.*

Removing Key Caps

If a Key Cap needs to be removed, the user should lift it very carefully from one side to prevent damage to the button, as indicated in FIG. 11:

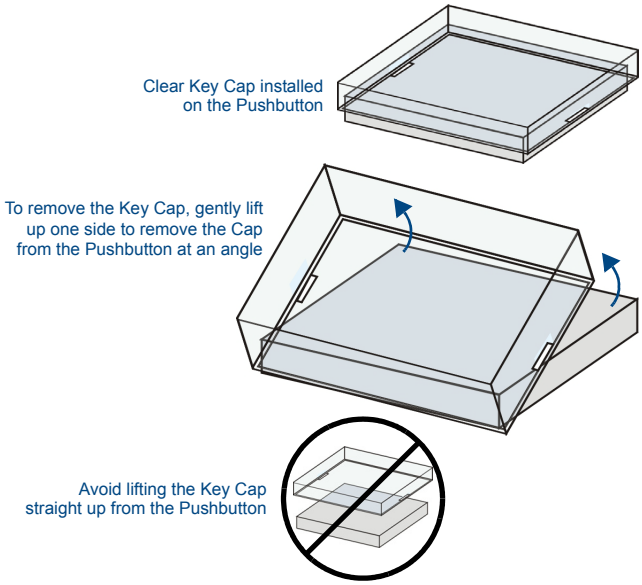

Clear Key Cap installed on the Pushbutton
To remove the Key Cap, gently lift up one side to remove the Cap from the Pushbutton at an angle
Avoid lifting the Key Cap straight up from the Pushbutton

FIG. 11 Removing a Key Cap from the Pushbutton

AMX recommends finalizing the ControlPad configuration prior to Key Cap and button label installation to avoid unnecessary removal of Key Caps.

Re-Assembling the ControlPad

Follow these steps to re-assemble the keypad.

1. With all button Key Caps in place, put the faceplate over the circuit board.
2. Use the supplied #6 screws to secure the faceplate to the circuit board. There are two screw holes on the top of the faceplate rim, and two on the bottom. Use either the Torx screws or #4 Phillips-head screws to attach the faceplate. Use a Torx driver with a T8 tip for the Torx screws; use a Phillips-head screwdriver for the Phillips-head screws.
3. Reattach the knob to the faceplate and screw it in as far as it can go.You should be able to press the knob as a button for extra functionality.
4. Tighten the knob in place using a .050" hex driver in the hole in the side of the knob.

Refer to the NOVARA 3000-Series ControlPads & Keypads Operation/Reference Guide (available at www.amx.com) for additional installation details and configuration instructions.

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